

## WEST Search History

DATE: Wednesday, November 24, 2004

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<input type="checkbox"/>	L11	L10 and irradi\$	49
<input type="checkbox"/>	L10	L9 and transgenic	111
<input type="checkbox"/>	L9	L7 and fus\$	214
<input type="checkbox"/>	L8	L7 and fus	5
<input type="checkbox"/>	L7	L6 and protoplast	233
<input type="checkbox"/>	L6	L5 and artificial chromosome	288
<input type="checkbox"/>	L5	L4 and artificial	331
<input type="checkbox"/>	L4	L3 and plant	455
<input type="checkbox"/>	L3	minichromosome	708
<input type="checkbox"/>	L2	L1 and irradiat\$	17
<input type="checkbox"/>	L1	plant artificial chromosome	76

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FILE 'HOME' ENTERED AT 14:11:01 ON 24 NOV 2004

=> file agricola caplus biosis

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FILE 'AGRICOLA' ENTERED AT 14:11:11 ON 24 NOV 2004

FILE 'CAPLUS' ENTERED AT 14:11:11 ON 24 NOV 2004

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=> s artificial chromosome?

L1 9661 ARTIFICIAL CHROMOSOME?

=> s l1 and plant?

L2 2108 L1 AND PLANT?

=> s l2 and irradiat?

L3 8 L2 AND IRRADIAT?

=> dup rem l3

PROCESSING COMPLETED FOR L3

L4 8 DUP REM L3 (0 DUPLICATES REMOVED)

=> d 1-8 tiu

'TIU' IS NOT A VALID FORMAT

In a multifile environment, a format can only be used if it is valid in at least one of the files. Refer to file specific help messages or the STNGUIDE file for information on formats available in individual files.

REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ti

L4 ANSWER 1 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Minichromosome formation in Chlorella cells **irradiated** with electron beams.

L4 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
TI A method for introducing foreign materials into cells using a laser beam to perforate the cell membrane

L4 ANSWER 3 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Rice genome organization: The centromere and genome interactions.

L4 ANSWER 4 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Identification of YAC clones containing the mutable slender glume locus slg in rice (Oryza sativa L.).

L4 ANSWER 5 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Induction and characterization of Ph1 wheat mutants.

L4 ANSWER 6 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI A YAC contig spanning the nevoid basal cell carcinoma syndrome, Fanconi anaemia group C, and xeroderma pigmentosum group A loci on chromosome 9q.

L4 ANSWER 7 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Identification of a yeast **artificial chromosome** clone encoding an accessory factor for the human interferon gamma receptor: Evidence for multiple accessory factors.

L4 ANSWER 8 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI MAPPING **IRRADIATION** HYBRIDS TO COSMID AND YEAST  
**ARTIFICIAL CHROMOSOME** LIBRARIES BY DIRECT HYBRIDIZATION OF ALU-PCR PRODUCTS.

=> d 4 ab

L4 ANSWER 4 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
AB A mutable slender glume gene slg, which often reverts to the wild-type state, was induced by gamma-ray **irradiation** of seeds of the japonica rice cultivar 'Gimbozu'. The final goal was to understand whether the slender glume mutation was associated with the insertion of a transposable element, utilizing map-based cloning techniques. The RFLP

(restriction fragment length polymorphism) analysis revealed that the slg locus was located between two RFLP loci, XNpb33 and R1440, on chromosome 7 with recombination values of 3.1% and 1.0%, respectively. Using these two RFLP loci as probes, five YAC (yeast **artificial chromosome**) clones containing either of these two loci were selected from a YAC library. Subsequently, both end fragments of these YAC clones, amplified by the inverse PCR (IPCR) method, were used to select new YAC clones more closely located to the slg locus. After repeating such a procedure, we successfully constructed a 6-cM YAC contig, and identified four overlapping YAC clones, Y1774, Y3356, Y5124, and Y5762, covering the slg locus. The chromosomal location of the slg was narrowed down to the region with a physical distance of less than 280 kb between the right-end fragments of Y1774 and Y3356.

=> d 8 ab

L4 ANSWER 8 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
AB A direct hybridization protocol is described for screening cosmid and yeast **artificial chromosome** libraries with pools of Alu-PCR products from somatic cell or **irradiation** hybrids. This method eliminates purification, cloning and analysis of each individual Alu-PCR product before library screening. A series of human X chromosome **irradiation** hybrids were mapped by this method, using a cosmid reference library for comparisons between overlapping hybrids to identify interesting clones for further analysis.

=> s l2 and protoplast?

L5 43 L2 AND PROTOPLAST?

=> s l5 and fus?

L6 12 L5 AND FUS?

=> dup rem l6

PROCESSING COMPLETED FOR L6

L7 12 DUP REM L6 (0 DUPLICATES REMOVED)

=> d 1-12 tui

'TUI' IS NOT A VALID FORMAT

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REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ti

L7 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

TI Cloning and sequences of pectate lyase genes isolated from environmental microorganisms, and uses in treating **plant** fibers or any pectate- or polygalacturonic acid-comprising material

L7 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

TI Thermostable  $\alpha$ -glucosidase genes isolated from environmental bacteria and their use for hydrolysis of malto-oligosaccharides and liquefied starch in food processing and dental care products

L7 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

TI Chemoenzymatic methods for the synthesis of statins and stain intermediates

L7 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN

TI Identification, cloning and sequences of microbial monooxygenases and their use for chiral synthesis and drug screening

L7 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Identification, characterization and sequences of thermostable amylases from environmental samples, and their use for starch hydrolysis

L7 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Method of making **plant artificial chromosomes** comprising exogenous nucleic acids and their use for **plant** breeding

L7 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI A new approach for the identification and cloning of genes: the pBACwich system using Cre/lox site-specific recombination

L7 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Evolution of whole cells and organisms by recursive sequence recombination

L7 ANSWER 9 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 TI Genomic reconstruction by mitotic recombination of YACs.

L7 ANSWER 10 OF 12 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN  
 TI Development of an in vivo complementation system for identification of **plant** genes using yeast **artificial chromosomes** (YACS).

L7 ANSWER 11 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 TI New vector for transfer of yeast **artificial chromosomes** to mammalian cells.

L7 ANSWER 12 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 TI MITOTIC RECOMBINATION OF YEAST **ARTIFICIAL CHROMOSOMES**.

=> d 6 ab

L7 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Disclosed are methods of making **plant artificial chromosomes**. In one embodiment, the method entails: (a) preparing recombinant **protoplasts** of a first **plant** species containing an exogenous nucleic acid (e.g., DNA) of interest; (b) producing chromosome fragments of chromosomes contained in the recombinant **protoplasts**; (c) **fusing** the recombinant **protoplasts** of (b) with **protoplasts** of a second **plant** species to produce **fused protoplasts**, wherein the first and second **plant** species may be the same or different; and (d) identifying **fused protoplasts** of (c) or cells derived from the **fused protoplasts** of (c) that contain chromosome fragments that exhibit normal **plant** chromosomal properties. The chromosome fragments may be moved from one **plant** species to another. Whole **plants**, **plant** cell cultures and intermediates of same are also provided.

=> d 6 pi

L7	ANSWER 6 OF 12	CAPLUS	COPYRIGHT 2004	ACS on STN	
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 2001011020	A1	20010215	WO 2000-US21461	20000807

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
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CA 2378787	AA	20010215	CA 2000-2378787	20000807
EP 1200557	A1	20020502	EP 2000-952574	20000807
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AU 772110	B2	20040408	AU 2000-65247	20000807

=> d 9 ab

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=> d 9 so

L7 ANSWER 9 OF 12 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on  
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 S0 Markie, D. [Editor]. METH MOL BIOL, (1995) pp. 217-230. Methods in  
 Molecular Biology; YAC protocols.  
 Publisher: Humana Press Inc., Suite 808, 999 Riverview Drive, Totowa, New  
 Jersey 07512, USA. Series: Methods in Molecular Biology.  
 CODEN: MMBYBO. ISSN: 0097-0816. ISBN: 0-89603-313-9.

=> d 10 ab

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=> d 10 so

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 S0 ACIAR proceedings, 1993. No. 45. p. 176-182  
 Publisher: Canberra, A.C.T. : Australian Centre for International  
 Agricultural Research, 1985-  
 ISSN: 1038-6920

=> s minichromosome?

L8 2358 MINICHROMOSOME?

=> s l8 and plant?

L9 386 L8 AND PLANT?

=> s l9 and irradi?

L10 10 L9 AND IRRADI?

=> dup rem l10

PROCESSING COMPLETED FOR L10

L11 9 DUP REM L10 (1 DUPLICATE REMOVED)

=> d 1-9 ti

L11 ANSWER 1 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Retrotransposon-mediated restoration of *Chlorella* telomeres: Accumulation of Zepp retrotransposons at termini of newly formed **minichromosomes**.

L11 ANSWER 2 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI **Minichromosome** formation in *Chlorella* cells **irradiated** with electron beams.

L11 ANSWER 3 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Alteration of chromosome numbers by generation of **minichromosomes**: Is there a lower limit of chromosome size for stable segregation?.

L11 ANSWER 4 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI DNA repair in a yeast origin of replication: Contributions of photolyase and nucleotide excision repair.

L11 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Cytological effects of pollen **irradiation** on wheat x *Leymus angustus* hybrids

L11 ANSWER 6 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI The RHC21 gene of budding yeast, a homologue of the fission yeast rad21+gene, is essential for chromosome segregation.

L11 ANSWER 7 OF 9 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 1  
TI An unstable **minichromosome** generates variegated oil yellow maize seedlings.

L11 ANSWER 8 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Cloning and characterisation of the *Schizosaccharomyces pombe* rad32 gene: A gene required for repair of double strand breaks and recombination.

L11 ANSWER 9 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI The mcm2-1 mutation of yeast causes DNA damage with a RAD9 requirement for repair.

=> d 2 ab

L11 ANSWER 2 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
AB Three **minichromosomes**, miniP7, miniB7, and miniK4 of 800 kbp, 450 kbp, and 550 kbp, respectively, were obtained from *Chlorella vulgaris* chromosome I by electron-beam **irradiation**. Two of them were structurally characterized: MiniP7 was formed by the deletion of an internal 180 kbp close to the right end of chromosome I. The 180-kbp region with a small interspersed nuclear element (SINE)-like element on its left terminus was translocated to another chromosome, leaving a footprint-like structure on miniP7. MiniB7 was a hybrid of chromosome I and another chromosome, retaining the left telomere and the centromere of chromosome I. The centromeric repetitive elements served as a rearrangement point in the miniB7 formation. These examples showed the complicated mechanisms involved in the **minichromosome** formation. The **minichromosomes** thus obtained can be useful for isolating the fundamental structural elements of a chromosome. Moreover, they may serve as starting materials or a vector to generate artificial chromosomes

carrying useful genes.

=>

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=> file agricola caplus biosis

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.63	0.63

FILE 'AGRICOLA' ENTERED AT 14:42:40 ON 24 NOV 2004

FILE 'CAPLUS' ENTERED AT 14:42:40 ON 24 NOV 2004

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=> s minichromosome?

L1 2358 MINICHROMOSOME?

=> s l1 and plant?

L2 386 L1 AND PLANT?

=> s l2 and irradi?

L3 10 L2 AND IRRADI?

=> dup rem l3

PROCESSING COMPLETED FOR L3

L4 9 DUP REM L3 (1 DUPLICATE REMOVED)

=> d 1-9 ti

L4 ANSWER 1 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Retrotransposon-mediated restoration of *Chlorella* telomeres: Accumulation of Zepp retrotransposons at termini of newly formed **minichromosomes**.

L4 ANSWER 2 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI **Minichromosome** formation in *Chlorella* cells **irradiated** with electron beams.

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TI Cytological effects of pollen **irradiation** on wheat x *Leymus angustus* hybrids

L4 ANSWER 6 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI The RHC21 gene of budding yeast, a homologue of the fission yeast rad21+gene, is essential for chromosome segregation.

L4 ANSWER 7 OF 9 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN DUPLICATE 1  
TI An unstable **minichromosome** generates variegated oil yellow maize seedlings.

L4 ANSWER 8 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Cloning and characterisation of the *Schizosaccharomyces pombe* rad32 gene: A gene required for repair of double strand breaks and recombination.

L4 ANSWER 9 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI The mcm2-1 mutation of yeast causes DNA damage with a RAD9 requirement for repair.

=> d 3 ab

L4 ANSWER 3 OF 9 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
AB Practical applications of **minichromosomes**, generated by de novo composition or by truncation of natural chromosomes, rely on stable transmission of these chromosomes. Functional centromeres, telomeres and

replication origins are recognized as prerequisites for **minichromosome** stability. However, it is not yet clear whether, and if yes, to what degree the chromatin content has a qualitative or quantitative impact on stable chromosome transmission. A small translocation chromosome, which arose after X-irradiation of a reconstructed field bean karyotype, comprised approx 5% of the haploid metaphase complement and was found to consist of three pieces of duplicated chromatin and a wild-type centromere. This chromosome was stably transmitted through all meristematic and pollen grain mitoses but was frequently lost during meiosis (66% loss in hemizygous and 33% in homozygous condition). This **minichromosome** was only a little smaller than stably segregating translocation chromosomes (comprising approx 6% of the genome) of a euploid field bean karyotype. The duplications specific for this **minichromosome** did not influence meiotic segregation when associated with non-duplicated chromatin of other chromosomes. In comparison with **minichromosomes** of other species, the possibility of a lower size limit for a stable chromosome transmission must therefore be considered which might be based, for instance, on insufficient lateral support of centromeres or on insufficient bivalent stability due to the incapability of chiasma formation.

=> d 3 so

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 SO Cytogenetics and Cell Genetics, (2001) Vol. 93, No. 3-4, pp. 175-181.  
 print.  
 CODEN: CGCGBR. ISSN: 0301-0171.

=> d 7 ab

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 Agricultural Library of the Department of Agriculture of the United States  
 of America. It contains copyrighted materials. All rights reserved.  
 (2004) on STN DUPLICATE 1  
 AB An unstable **minichromosome** comprising part of the short arm of  
 chromosome 10 of maize was recovered from an oil yellow variegated  
**plant** as a consequence of gamma irradiation of pollen.  
 The cytological and gene dosage observations are consistent with the  
**minichromosome** being a partial isochromosome, which lags at  
 mitotic and meiotic anaphase. Loss of the **minichromosome**, which  
 carries two doses of the +gene, causes phenotypic variegation in otherwise  
 yellow lethal (Oy/Oy or Oy/oy) and olive (Oy/+ or oy/oy) genotypes. The  
**minichromosome** was transmitted to 8.1% of progeny via the pollen  
 and 0.5% via the egg. Variations in the number and size of the  
**minichromosome** were recovered in progeny from a large test cross  
 designed to test the feasibility for the detection of genetic variants  
 including apomicts. No apomicts were recovered. All progeny with the  
 appropriate maternal olive phenotype and the paternally derived coloured  
 aleurone proved to be haploids. The recovery of a large  
**minichromosome** provides evidence for rare pairing and exchange  
 with the short arm of chromosome 10. The variants of chromosome 105  
 generated from this programme provide useful material for further  
 cytological, genetic and molecular analysis.

=> d 7 so

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SO Chromosoma, June 1996. Vol. 104, No. 8. p. 575-584  
Publisher: Berlin ; New York : Springer-Verlag,  
CODEN: CHROAU; ISSN: 0009-5915

=> dis his

(FILE 'HOME' ENTERED AT 14:40:56 ON 24 NOV 2004)

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 14:42:40 ON 24 NOV 2004

L1 2358 S MINICHROMOSOME?  
L2 386 S L1 AND PLANT?  
L3 10 S L2 AND IRRADI?  
L4 9 DUP REM L3 (1 DUPLICATE REMOVED)

=> s protoplast and fus? and plant?

L5 3739 PROTOPLAST AND FUS? AND PLANT?

=> s l5 and (artificial or minichromosome)

L6 37 L5 AND (ARTIFICIAL OR MINICHROMOSOME)

=> dup rem l6

PROCESSING COMPLETED FOR L6

L7 36 DUP REM L6 (1 DUPLICATE REMOVED)

=> d 1-10 ti

L7 ANSWER 1 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Cloning and sequences of pectate lyase genes isolated from environmental microorganisms, and uses in treating **plant** fibers or any pectate- or polygalacturonic acid-comprising material

L7 ANSWER 2 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Thermostable  $\alpha$ -glucosidase genes isolated from environmental bacteria and their use for hydrolysis of malto-oligosaccharides and liquefied starch in food processing and dental care products

L7 ANSWER 3 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Chemoenzymatic methods for the synthesis of statins and stain intermediates

L7 ANSWER 4 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Identification, cloning and sequences of microbial monooxygenases and their use for chiral synthesis and drug screening

L7 ANSWER 5 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Identification, characterization and sequences of thermostable amylases from environmental samples, and their use for starch hydrolysis

L7 ANSWER 6 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Induction mechanism of cytoplasmic male sterility by **artificial** chimera synthesis in Brassica

L7 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Heritable endogenous gene regulation in **plants** with designed polydactyl zinc finger transcription factors

L7 ANSWER 8 OF 36 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Rational design of **artificial** zinc-finger proteins using a nondegenerate recognition code table.

L7 ANSWER 9 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Analysis of MADS box protein-protein interactions in living **plant**

cells

L7 ANSWER 10 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI A chimeric green fluorescent protein gene as an embryogenic marker in transgenic cell culture of *Nicotiana plumbaginifolia* Viv.

=> d 11-20 ti

L7 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Method of making **plant artificial** chromosomes comprising exogenous nucleic acids and their use for **plant** breeding

L7 ANSWER 12 OF 36 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN  
TI Somatic hybridization and applications in **plant** breeding.

L7 ANSWER 13 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Changes in mitochondrial and chloroplast genome structure accompanied with cytoplasmic male sterility induced by **protoplast fusion** and chimera synthesis in Brassicaceae

L7 ANSWER 14 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI A new approach for the identification and cloning of genes: the pBACwch system using Cre/lox site-specific recombination

L7 ANSWER 15 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Evolution of whole cells and organisms by recursive sequence recombination

L7 ANSWER 16 OF 36 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN  
TI Efficient selection of potato heterokaryons by flow cytometric sorting and the regeneration of hybrid **plants**.

L7 ANSWER 17 OF 36 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Production of intergeneric hybrid calli from C-3 and C-4 species of Amaranthaceae through **protoplast fusion**.

L7 ANSWER 18 OF 36 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Characteristics of **artificial** hybrids between *Lentinula edodes* and *Coriolus versicolor*.

L7 ANSWER 19 OF 36 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Gene manipulation: Its impact on tree improvement.

L7 ANSWER 20 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1  
TI Application of biotechnology to agricultural production

=> d 11 ab

L7 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Disclosed are methods of making **plant artificial** chromosomes. In one embodiment, the method entails: (a) preparing recombinant protoplasts of a first **plant** species containing an exogenous nucleic acid (e.g., DNA) of interest; (b) producing chromosome

fragments of chromosomes contained in the recombinant protoplasts; (c) **fusing** the recombinant protoplasts of (b) with protoplasts of a second **plant** species to produce **fused** protoplasts, wherein the first and second **plant** species may be the same or different; and (d) identifying **fused** protoplasts of (c) or cells derived from the **fused** protoplasts of (c) that contain chromosome fragments that exhibit normal **plant** chromosomal properties. The chromosome fragments may be moved from one **plant** species to another. Whole **plants**, **plant** cell cultures and intermediates of same are also provided.

=> d pi

L7 ANSWER 1 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
PATENT NO. KIND DATE APPLICATION NO. DATE  
-----  
PI WO 2004090099 A2 20041021 WO 2004-US10229 20040402  
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
TD, TG

=> d 12 ab

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=> d 12 so

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(2004) on STN

SO Plant breeding reviews, 2001. Vol. 20 p. 167-225  
Publisher: New York, N.Y. : John Wiley & Sons, Inc.  
CODEN: PBREE3; ISSN: 0730-2207

=> d 13 ab

L7 ANSWER 13 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN  
AB The authors obtained cytoplasmic male sterile (CMS) lines by  
**artificial** chimera between red cabbage and Komatsuna (B.  
campestris), and by intergeneric **protoplast fusion**  
between radish (Raphanus sativus) and cabbage (Brassica oleracea). Two  
types of different CMSs have stably maintained the radish CMS-specific  
orf138 in the mitochondria, although parental materials in both CMSs are  
normal **plants**. As it is very difficult to explain the mechanism  
of recombination within each cytoplasmic genome, the change in quant.  
regulation was thought to be due to the copy number of heteroplasmic genomes  
or genes that were originally present. RFLP and PCR analyses support the  
existence of stoichiometric shifts in mitochondrial and chloroplast

genomes or genes. In order to determine the stoichiometric shifts of cytoplasmic genomes accompanying CMS induction, RFLP patterns among mother **plants** and the resulting CMSs were compared using known chloroplast and mitochondrial gene probes. RFLPs in the two CMSs were very similar to those in Ogura CMS radish. PCR cycle expts. also supports our theory.

=> d 17 ab

- L7 ANSWER 17 OF 36 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- AB Intergeneric somatic hybrid calli were obtained through electrofusion between protoplasts of *Celosia cristata* L. (C-3 species) cell suspension and *Amaranthus tricolor* L. (C-4 species) cotyledon. The highest binary **fusion** frequency, 4 apprx 5%, was attained when the protoplasts were suspended in **fusion** solution containing 0.4 M sorbitol and 2.0 mM CaCl<sub>2</sub>, aligned by an AC field (200 V/cm, 0.5 MHz) for 30 s and **fused** by a single DC square pulse at 1.6 kV/cm for 40  $\mu$ -s. **Fusion** products were identified by characteristics of both parents in the hybrid cells: they possessed green chloroplasts or pink plastids from cotyledonary protoplasts as well as a cytoplasm-rich colorless sector derived from cell suspension protoplasts. The occurrence of two types of calli, compact and friable, obtained after culturing on proliferation medium lead to the isolation of putative hybrid calli without any **artificial** selection because *C. cristata* protoplasts regenerated only friable calli and *A. tricolor* protoplasts did not produce calli. A total of 14 lines of putative hybrid compact calli were obtained by screening on the basis of callus morphology. An isozyme analysis of acid phosphatase confirmed the hybridity of 14 lines of compact calli. Callus morphology was also studied by scanning electron microscopy.

=> d 21-30 ti

- L7 ANSWER 21 OF 36 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI Genomic reconstruction by mitotic recombination of YACs.
- L7 ANSWER 22 OF 36 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
- TI Development of an in vivo complementation system for identification of **plant** genes using yeast **artificial** chromosomes (YACS).
- L7 ANSWER 23 OF 36 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI New vector for transfer of yeast **artificial** chromosomes to mammalian cells.
- L7 ANSWER 24 OF 36 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
- TI MITOTIC RECOMBINATION OF YEAST **ARTIFICIAL** CHROMOSOMES.
- L7 ANSWER 25 OF 36 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN
- TI The development of genetically modified varieties of agricultural crops by the seeds industry.
- L7 ANSWER 26 OF 36 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Preferential recovery of somatic hybrids from **protoplast fusion** of two *Nicotiana* species in the absence of **artificial** selection.

L7 ANSWER 27 OF 36 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Tissue culture technique and its application in major agronomic crops.

L7 ANSWER 28 OF 36 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN

TI **Plant** regeneration of 'Valencia' sweet orange, 'Femminello' lemon, and the interspecific somatic hybrid following **protoplast fusion**.

L7 ANSWER 29 OF 36 CAPLUS COPYRIGHT 2004 ACS on STN

TI Insect growth inhibitors from *Petunia* and other solanaceous **plants**

L7 ANSWER 30 OF 36 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI MAPPING OF THE FIELD DISTRIBUTION AROUND DIELECTROPHORETICALLY ALIGNED CELLS BY MEANS OF SMALL PARTICLES AS FIELD PROBES.

=> s ((klimyuk v?)) or (klimyuk, v?))/au  
 UNMATCHED RIGHT PARENTHESIS 'V?))/AU'  
 The number of right parentheses in a query must be equal to the number of left parentheses.

=> s ((klimyuk v?) or (klimyuk, v?))/au  
 L8 77 ((KLIMYUK V?) OR (KLIMYUK, V?))/AU

=> s l8 and (artificial chromosome or minichromosome)  
 L9 2 L8 AND (ARTIFICIAL CHROMOSOME OR MINICHROMOSOME)

=> dup rem l9  
 PROCESSING COMPLETED FOR L9  
 L10 2 DUP REM L9 (0 DUPLICATES REMOVED)

=> d 1-2 ti

L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

TI Method of making plant artificial chromosomes comprising exogenous nucleic acids and their use for plant breeding

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

TI PYAC-GN, a yeast **artificial chromosome** vector which codes GUS and APH(3')II reporter genes for plant cells

=> d 2 ab

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

AB Vector pYAC-GN was constructed to introduce YAC clones into plant cells for functional anal. of large fragments of DNA. To facilitate the selection of plant cells which have taken up YACs, pYAC-4 was modified by insertion of GUS and NEO reporter genes under control of the 35S promoter of cauliflower mosaic virus into the ClaI and SalI sites resp. A polylinker containing NotI, ClaI and SalI unique restriction sites was also introduced into the EcoRI site of SUP4.

=> d 2 so



L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
SO Biopolimery i Kletka (1985-2000) (1991), 7(4), 95-7  
CODEN: BIKLEK; ISSN: 0233-7657

=> s ((kuchuk n?) or (kuchuk, n?))/au  
L11 45 ((KUCHUK N?) OR (KUCHUK, N?))/AU

=> s l11 and (artificial chromosome or minichromosome)  
L12 1 L11 AND (ARTIFICIAL CHROMOSOME OR MINICHROMOSOME)

=> d ti

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Method of making plant artificial chromosomes comprising exogenous nucleic  
acids and their use for plant breeding

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and SOLIDSTATE reloads

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MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004  
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NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

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=> s calicheamicin

L1 840 CALICHEAMICIN

=> s l1 and (chromosome or dna or nucleic)

L2 367 L1 AND (CHROMOSOME OR DNA OR NUCLEIC)

=> s l2 and plant?

L3 4 L2 AND PLANT?

=> dup rem l3

PROCESSING COMPLETED FOR L3

L4 4 DUP REM L3 (0 DUPLICATES REMOVED)

=> d 1-4 ti

L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

TI Mutated anti-CD22 antibodies and their immunoconjugates or immunotoxins for treating leukemia and lymphoma expressing CD22

L4 ANSWER 2 OF 4 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Transcriptional effects of the potent enediyne anti-cancer agent **calicheamicin** gammaII.

L4 ANSWER 3 OF 4 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Transcriptional response to radical-mediated **DNA** damaging agents in *S. cerevisiae*.

L4 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

TI Method of making **plant** artificial chromosomes comprising exogenous **nucleic** acids and their use for **plant** breeding

=> d 3 so

L4 ANSWER 3 OF 4 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

SO Abstracts of Papers American Chemical Society, (2002) Vol. 224, No. 1-2, pp. TOXI 73. print.

Meeting Info.: 224th National Meeting of the American Chemical Society. Boston, MA, USA. August 18-22, 2002.

CODEN: ACSRAL. ISSN: 0065-7727.

=> d 3 ab

L4 ANSWER 3 OF 4 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

=> d 2 ab

L4 ANSWER 2 OF 4 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

AB We have investigated the mode of action of **calicheamicin** in living cells by using oligonucleotide microarrays to monitor its effects on gene expression across the entire yeast genome. Transcriptional effects were observed as early as 2 min into drug exposure. Among these effects were the upregulation of two nuclear proteins encoding a Y'-helicase (a sub-telomerically encoded protein whose function is to maintain telomeres) and a suppressor of *rpc10* and *rpb40* mutations (both *rpc10* and *rpb40* encode RNA polymerase subunits). With longer **calicheamicin** exposure, genes involved in chromatin arrangement, **DNA** repair and/or oxidative damage, **DNA** synthesis and cell cycle checkpoint control as well as other nuclear proteins were all

differentially expressed. Additionally, ribosomal proteins and a variety of metabolic, biosynthetic, and stress response genes were also altered in their expression.

=> d ab

L4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN

AB Recombinant immunotoxins are fusion proteins composed of the Fv domains of antibodies (i.e. RFB4) fused to bacterial or **plant** toxins. RFB4 (Fv)-PE38 is an immunotoxin that targets CD22 expressed on B cells and B cell malignancies. The present invention provides antibodies and antibody fragments that have improved ability to bind the CD22 antigen of B cells and B cell malignancies compared to RFB4. Immunotoxins made with the antibodies and antibody fragments of the invention have improved cytotoxicity to CD22-expressing cancer cells. Compns. that incorporate these antibodies into chimeric immunotoxin mols. that can be used in medicaments and methods for inhibiting the growth and proliferation of leukemia and lymphoma cells.

=> s esperamicin

L5 336 ESPERAMICIN

=> s l5 and (chromosome or dna or nucleic)

L6 130 L5 AND (CHROMOSOME OR DNA OR NUCLEIC)

=> s l6 and plant?

L7 3 L6 AND PLANT?

=> dup rem l7

PROCESSING COMPLETED FOR L7

L8 3 DUP REM L7 (0 DUPLICATES REMOVED)

=> d 1-3 ti

L8 ANSWER 1 OF 3 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
TI Transcriptional response to radical-mediated **DNA** damaging agents in *S. cerevisiae*.

L8 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

TI Method of making **plant** artificial chromosomes comprising exogenous **nucleic** acids and their use for **plant** breeding

L8 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

TI Dictyostelium discoideum, a lower eukaryote model for the study of **DNA** repair: Implications for the role of **DNA**-damaging chemicals in the evolution of repair proficient cells

=> d 3 ab

L8 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

AB The evolution of the ability of living cells to cope with stress is crucial for the maintenance of their genetic integrity. Yet low levels of mutation must remain to allow adaptation to environmental changes. The cellular slime mold *D. discoideum* is a good system for studying mol. aspects of the repair of lethal and mutagenic damage to **DNA** by radiation and chems. The wild-type strains of this soil microorganism are extremely resistant to **DNA** damaging agents. In nature the ameboid cells in their replicative stage feed on soil bacteria and are exposed to numerous **DNA**-damaging chems. produced by various soil microorganisms. It is probable that the evolution of repair systems in

this organism and perhaps in others is a consequence of the necessity to cope with chemical damage which also confers resistance to radiation.

=> s l4 and protoplast?

L9 1 L4 AND PROTOPLAST?

=> d ti

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

TI Method of making **plant** artificial chromosomes comprising exogenous **nucleic** acids and their use for **plant** breeding

=> s dynemicin

L10 325 DYNEMICIN

=> s l10 and (chromosome or dna or nucleic)

L11 127 L10 AND (CHROMOSOME OR DNA OR NUCLEIC)

=> s l11 and protoplast?

L12 1 L11 AND PROTOPLAST?

=> d ti

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

TI Method of making plant artificial chromosomes comprising exogenous **nucleic** acids and their use for plant breeding

=> s l11 and plant?

L13 1 L11 AND PLANT?

=> d ti

L13 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

TI Method of making **plant** artificial chromosomes comprising exogenous **nucleic** acids and their use for **plant** breeding

=> s neocarzinostatin

L14 2094 NEOCARZINOSTATIN

=> s l14 and (chromosome or dna or nucleic)

L15 890 L14 AND (CHROMOSOME OR DNA OR NUCLEIC)

=> s l15 and plant?

L16 24 L15 AND PLANT?

=> dup rem l16

PROCESSING COMPLETED FOR L16

L17 24 DUP REM L16 (0 DUPLICATES REMOVED)

=> d 1-10 ti

L17 ANSWER 1 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN

TI Refined species-independent methods for Agrobacterium-mediated **plant** transformation limiting the co-transfer of superfluous, undesirable **DNA**

L17 ANSWER 2 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Transcriptional response to radical-mediated **DNA** damaging agents in *S. cerevisiae*.

L17 ANSWER 3 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Method of making **plant** artificial chromosomes comprising exogenous **nucleic** acids and their use for **plant** breeding

L17 ANSWER 4 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 TI Gene transcription analysis of *Saccharomyces cerevisiae* exposed to **neocarzinostatin** protein-chromophore complex reveals evidence of **DNA** damage, a potential mechanism of resistance, and consequences of prolonged exposure.

L17 ANSWER 5 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Antagonistic anti- $\alpha\beta 3$  integrin antibodies

L17 ANSWER 6 OF 24 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI *Dictyostelium discoideum*, a lower eukaryote model for the study of **DNA** repair: Implications for the role of **DNA**-damaging chemicals in the evolution of repair proficient cells

L17 ANSWER 7 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 TI COMPARATIVE STUDY OF **CHROMOSOME** ABERRATIONS INDUCED BY **NEOCARZINOSTATIN** AND PINGYANGMYCIN IN VICIA-FABA.

L17 ANSWER 8 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 TI MUTAGENICITY OF **NEOCARZINOSTATIN** IN *NEUROSPORA-CRASSA*.

L17 ANSWER 9 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 TI MODE OF INHIBITION OF **DNA** REPLICATION IN **NEOCARZINOSTATIN** TREATED HELA CELLS.

L17 ANSWER 10 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 TI THE ROLES OF **DNA** POLYMERASES ALPHA BETA AND GAMMA IN **DNA** REPAIR SYNTHESIS INDUCED IN HAMSTER AND HUMAN CELLS BY DIFFERENT **DNA** DAMAGING AGENTS.

=> d 11-20 tu

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L17 ANSWER 11 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 TI A NEW *SALMONELLA-TYPHIMURIUM* TESTER STRAIN TA-102 WITH ADENINE THYMINE BASE PAIRS AT THE SITE OF MUTATION DETECTS OXIDATIVE MUTAGENS.

L17 ANSWER 12 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN  
 TI EFFECTS OF CAFFEINE ON **NEOCARZINOSTATIN** INDUCED INHIBITION OF CELL CYCLE TRAVERSE IN HELA-S-3 CELLS.

L17 ANSWER 13 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI INTERACTION BETWEEN SV-40 **DNA** AND CAMPTOTHECIN AN ANTI TUMOR ALKALOID.

L17 ANSWER 14 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI PLASMINOGEN ACTIVATOR INDUCTION OF SYNTHESIS BY **DNA** DAMAGE.

L17 ANSWER 15 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI EFFECT OF BLEOMYCIN **NEOCARZINOSTATIN** AND HYDROXY UREA ON THE PREFORMED CARRAGEENAN GRANULOMA IN RATS MECHANISM OF HYALURONIC-ACID ACCUMULATION BY BLEOMYCIN.

L17 ANSWER 16 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI EFFECTS OF INHIBITORS OF **DNA** SYNTHESIS ON SPONTANEOUS AND UV LIGHT INDUCED SISTER CHROMATID EXCHANGES IN CHINESE HAMSTER CELLS.

L17 ANSWER 17 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI ENHANCEMENT BY CAFFEINE OF **NEOCARZINOSTATIN** CYTO TOXICITY IN MURINE LEUKEMIA L-1210 CELLS.

L17 ANSWER 18 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI ENDO NUCLEASE PROBES OF NON-S DEPENDENT CLASTOGEN **DNA** INTERACTION PRODUCTS.

L17 ANSWER 19 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI INHIBITION OF SURFACE IMMUNO GLOBULIN CENTRAL CAPPING OF DAUDI CELLS AND CELL SPREADING OF HELA-S-3 CELLS BY NEO CARZINOSTATIN.

L17 ANSWER 20 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI THE CAUSE OF G-2 ARREST IN CHINESE HAMSTER OVARY CELLS TREATED WITH ANTI CANCER DRUGS.

=> d 21-24 ti

L17 ANSWER 21 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI CAFFEINE POTENTIATION ON LETHALITY OF L-1210 CELLS TREATED WITH **NEOCARZINOSTATIN**.

L17 ANSWER 22 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI **NEOCARZINOSTATIN** A NEW AGENT ACTIVE IN THE TREATMENT OF ACUTE LEUKEMIA.

L17 ANSWER 23 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI SPECIFIC G-2 BLOCK IN HELA-S-3 CELLS BY **NEOCARZINOSTATIN**.

L17 ANSWER 24 OF 24 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI CELL CYCLE PHASE SPECIFICITY OF ANTI TUMOR AGENTS.

=> s l15 and protoplast?

L18 1 L15 AND PROTOPLAST?

=> d ti

L18 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

TI Method of making plant artificial chromosomes comprising exogenous  
**nucleic** acids and their use for plant breeding